Amendments to the Specification:

Please replace paragraph [02] with the following rewritten paragraph:

This application claims the benefit of U.S. Provisional Application ~~60/492,604~~60/492,904, filed Aug. 6, 2003, the entire contents of which are hereby incorporated by reference.

Please replace paragraph [70] with the following rewritten paragraph:

FIG. 6 is a graphical representation of the calculation of local nanotube volume fraction when given an arbitrary distribution in nanotube diameters, and illustrates schematically the computation for the nanocomposite elastic modulus described in Equations (15-18). The solid curve in **FIG. 6** is the product of some arbitrary nanotube volume distribution, $\psi(d)$, and nanotube volume fraction, V_{NT}, within the composite. The shaded area beneath the curve represents the nanotube volume fraction. The n^{th} composite is a narrow "slice" of the graph, represented by the dashed vertical lines, where there exists a narrow distribution of nanotube diameters ~~d_n~~Δd_n. The partial volume of the n^{th} composite, v_n in Equation (16), is then the area between those dashed lines. Calculation of the local volume fraction of nanotubes in the n^{th} composite is simply the area between the dashed lines underneath the solid curve, shown by the hatched area, divided by the total area between the dashed lines.

Please replace paragraph [90] with the following rewritten paragraph:

In addition to nanotube orientation, nanotube length is an important parameter. Variation in nanotube length is difficult to quantify from TEM analysis, because a large number of nanotubes are severed when cutting the specimen with a microtome. The lengths of a majority of the nanotubes in the as-processed composite appear to range between 500 nm and 2 ~~m~~μm, with the average length being above 1 ~~m~~μm.

Please replace paragraph [105] with the following rewritten paragraph:

Resulting electron microscopy shows both dispersion of the carbon nanotubes and alignment in a primary direction. FIGS. 22A and ~~22~~A22B show the bulk carbon nanotubes that are entangled and form large agglomerates on the millimeter or micrometer scales. FIG. 23 shows the cross-section of a polymer composite where the nanotubes are uniformly dispersed and aligned in a primary direction (the white arrow indicates the direction of orientation.